

VOROVICH, I.I., doktor fiz.-mat. nauk, prof.; USTINOV, Yu.A., asistent;
~~SAFRONOV, Yu.V., kand. fiz.-mat. nauk, dotsent~~

Determining contact pressure between the tire and the rim.

Izv. vys. ucheb. zav.; mashinostr. no.10:26-37 '64

(MIRA 18:1)

1. Rostovskiy-na-Donu gosudarstvennyy universitet.

AKSENTYAN, O.K. (Rostov-na-Donu); VOROVICH, I.I. (Rostov-na-Donu)

Stressed state of a plate of small thickness. Prikl. mat. i mekh.
27 no.6:1057-1074 N-D '63. (MIRA 17:1)

ACCESSION NR: AP4001621

S/0040/63/027/006/1057/1074

AUTHORS: Akseytyan, O. K. (Rostov-na-Donu); Vorovich, I. I. (Rostov-na-Donu)

TITLE: State of stress in a small-thickness plate

SOURCE: Prikl. matematika i mekhanika, v. 27, no. 6, 1963, 1057-1074

TOPIC TAGS: plate stress distribution, stress thickness relationship, biharmonic stress distribution, rotational stress distribution, potential stress distribution, small thickness plate

ABSTRACT: The authors investigate an elasticity theory problem for a plate under stresses given on the boundary. They study the behavior of the stressed state when the thickness of the plate is decreased. The methods for constructing asymptotic processes for this problem were proposed by A. L. Gol'denveyzer in a report at the first All-Union Conference on Theoretical and Applied Mechanics in 1960, and also by several others. The method given by the authors in the present work reduces the construction of the asymptotic to sequential solution of a series of biharmonic problems, equivalent to a problem in applied theory of flexure of a plate and inversion of an infinite matrix. This matrix does not depend on the

Card 1/2

ACCESSION NR: AP4001621

geometry of the plate, and its inversion may be done once for all plates and loads.
Orig. art. has: 75 formulas and 4 figures.

ASSOCIATION: none

SUBMITTED: 24Jun63

SUB CODE: AP

DATE ACQ: 19Dec63

NO REF SOV: 007

ENCL: 00

OTHER: 003

Card 2/2

VOROVICH, I. I. (Rostov-on-Don)

"Some mathematical problems of the theory of plates and shells"

report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow, 29 Jan - 5 Feb 1964.

ALEKSANDROV, V.M.; BABESHKO, V.A.; VOROVICH, I.I.; (Rostov-on-Don)

"Asymptotic method of solving contact problems for the layer of small thickness"

report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow, 29 January - 5 February 1964

VOROVICH, I.I.; KHAPLANOV, M.G.

Work of Rostov mathematicians in recent years. Usp. mat. nauk 18
no.2:211-233 Mr-Apr '63. (MIRA 16:8)

(Rostov--Mathematics)

VOROVICH, I.I.

Some cases of the existence of periodic solutions. Trudy Sem. po
funk. anal. no. 3/4:3-19 '60. (MIRA 14:10)
(Differential equations) (Functional analysis)

ALEKSANDROV, V.M. (Rostov-na-Domu); VOROVICH, I.I. (Rostov-na-Domu)

Action of a stamp on an elastic layer of finite thickness. Prikl.
mat. i mekh. 24 no. 2:323-333 Mr-Apr '60. (MIRA 14:5)
(Elasticity)

VOROVICH, I.I. (Rostov-na-Donu)

Some general representations of solutions to the equations of the
theory of shallow shells. Prikl. mat. i mekh. 25 no.3:543-547
My-Je '61. (MIRA 14:7)
(Elastic plates and shells) (Differential equations, Partial)

VOROVICH, I.I.; YUDOVICH, V.I. (Rostov-na-Donu)

Stationary flow of a viscous incompressible fluid. Mat. stor. 53
no. 4:393-428 Ap '61. (MIRA 14:5)

(Hydrodynamics)

32508

S/044/61/000/011/031/049
C111/C444

/6, 4600

AUTHOR: Vorovich, J. J.
TITLE: On some cases of the existence of periodic solutions
PERIODICAL: Referativnyy zhurnal, Matematika, no. 11, 1961, 76-77,
abstract 11B406. (Tr. Seminara po funkts. analizu. Rostovsk.-
n/D. un-t, Voronezhsk. un-t, 1960, vyp. 3-4, 3-19)
TEXT: Considered be the Hilbert space l_2 with the elements
 $X = x_1, \dots, x_n, \dots$) and in it the infinite system of differential
equations

$$\lambda^2 \ddot{X} = \text{grad}_{l_2} \Phi (X, \sin t, \cos t), \quad (1)$$

where Φ is a functional in l_2 , λ^2 being constant. If Φ does not
contain the variable t , then (1) may be considered as the equation of
free oscillations of a mechanical system. If Φ contains the time
explicitly, then (1) describes a parametric excitation of the system.
In this paper one proves the existence of periodic solutions of the

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S/044/61/000/011/031/049
C111/C444

On some cases of the existence . . .
equation (1) and of the equation

$$\ddot{X} = \text{grad}_{1_2} \phi (X, \sin t, \cos t) + F(t) \quad (2)$$

where $F(t)$ is a vector function with the period 2π . The equation (2) may be considered to be the equation of the forced oscillations of the system. $S_R \times |x|$ indicates the topological product of the closed sphere $S_R \subset 1_2$ with radius R and the square $-1 \leq v, w \leq 1$. The following conditions be satisfied: 1.) $\phi(X, v, w)$ is continuous and continuously differentiable on every $S_R \times 1 \times 1$, $R > 0$; 2.) $\phi(X, v, w)$ is even with respect to all variables X, v, w . 3.) $\sum_{i=1}^{\infty} x_i \frac{\partial \phi}{\partial x_i} < 0$.

where the equality sign only holds for $x = 0$.

Then on every sphere $\int_0^{2\pi} \sum_{i=1}^{\infty} x_i^2 dt = \rho^2 > 0$ (1) possesses at least a denumerable set of 2π - periodic solutions, to which correspond

Card 2/4

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S/044/61/000/011/031/049
C111/C444

On some cases of the existence . . .
different λ^2 and the Fourier series of which only contain sinus terms.
There by exists a sequence of solutions such that $\lim_{n \rightarrow \infty} \lambda_n^2 = 0$.
As Φ the functional

$$\Phi = -\frac{1}{2} \sum_{i=1}^{\infty} \mu_i^2 x_i^2 + U(X, \sin t, \cos t),$$

be taken, where $0 \leq \mu_i \leq \delta < 1$, the functional $U \geq 0$, satisfying
the conditions 1) and 2). Further on as $F(t)$ a 2π - periodic function
with the components $F = (f_1) \in L_2(0, 2\pi)$ be taken, where

$$\sum_{i=1}^{\infty} \int_0^{2\pi} f_1^2 dt < \infty \text{ and}$$

$$\varphi_{im} = \frac{1}{\pi} \int_0^{2\pi} f_1 \cos mtdt = 0, 1, m = 1, 2, \dots, \infty.$$

Then (2) possesses at least one 2π - periodic solution, the Fourier
series of which contains only sinus terms. Beside one states that by
Card 3/4

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S/044/61/000/011/031/049
C111/C444

On some cases of the existence . . .
a suitable change of a number of Fourier coefficients of the function
 $F(t)$ one can attain the same number of Fourier coefficients of the
solution $X(t)$ having arbitrary given values. X
[Abstracter's note: Complete translation.]

Card 4/4

L 06066-67 EWT(1)/EWP(m)/EWT(m) WW/DJ

ACC NR: AP6030115

(N)

SOURCE CODE: UR/0421/66/000/004/0101/0113

AUTHOR: Vorovich, L. S. (Rostov-on-Don)

45
B

ORG: none

TITLE: Vertical impact of a sphere semi-immersed in a fluid of finite depth

SOURCE: AN SSSR. Izvestiya. Mekhanika zhidkosti i gaza, no. 4, 1966, 101-113

TOPIC TAGS: impact test, fluid dynamics /

2
11

ABSTRACT: The study of impact in an ideal incompressible fluid, in the classical statement of the problem, reduces to mixed problems in the potential theory. In the plane case, the solution of these problems is simplified by use of the methods of the theory of a complex variable. In the three dimensional case, the matter becomes more complicated, particularly if the boundaries of the volume containing the fluid are of complex form. For this reason, the effect of the bottom and the walls of a vessel on the pressure and velocity distribution during impact has been little studied in the three dimensional case. The present work considers the vertical impact of a spherical solid body, half immersed in a layer of fluid of finite depth (See Fig. 1.)

Card 1/2

L 06066-67

ACC NR: AP6030115

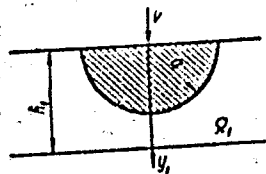


Fig. 1.

In the mathematical treatment of the problem, particular attention is paid to the effect of the bottom on the phenomena which occur during impact. Orig. art. has: 66 formulas and 7 figures.

SUB CODE: 20/ SUBM DATE: 03Mar66/ ORIG REF: 003

Card 2/2 *eq/2*

VOROVICH, M. M.

B. P. SELIVANOV, REPTS. INST. METALS (Leningrad) n. 15, 171-7(1933)

1st and 2nd codes

PROCESS AND PROPERTIES INDEX

4

2A

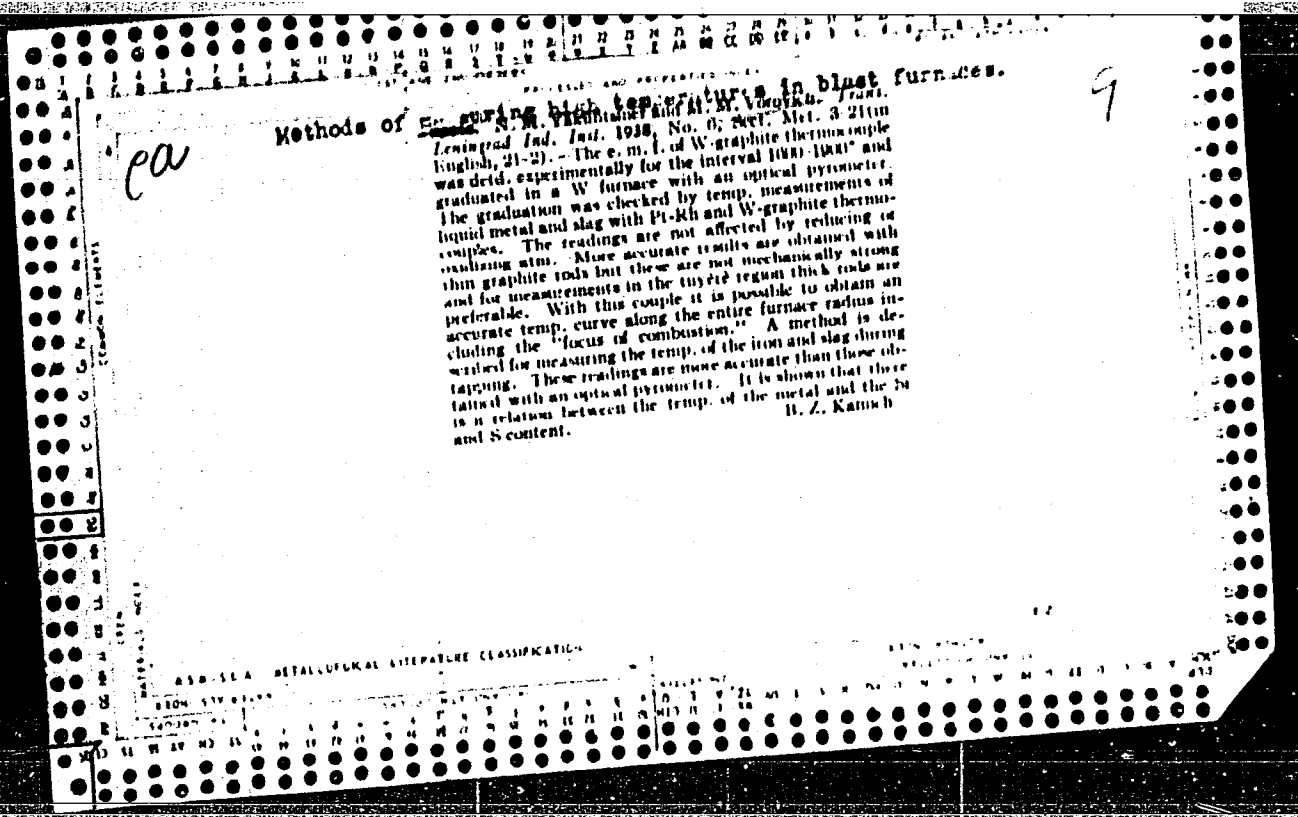
Electric furnace with a gaseous protecting medium of the heating elements. M. M. Yarovsk. Russ. 751,673, July -1, 1938. Construction details.

COMMON ELEMENTS

CHANGING VARIABILITY INDEX

ASB-55A METALLURGICAL LITERATURE CLASSIFICATION

150000 151000 152000 153000 154000 155000 156000 157000 158000 159000 160000 161000 162000 163000 164000 165000 166000 167000 168000 169000 170000 171000 172000 173000 174000 175000 176000 177000 178000 179000 180000 181000 182000 183000 184000 185000 186000 187000 188000 189000 190000 191000 192000 193000 194000 195000 196000 197000 198000 199000 200000



1ST AND 2ND ORDERS		PROCESSES AND PROPERTIES INDEX	
F	1690. EXPERIENCE IN THE OPERATION OF DISTRICT HEATING AT KARKOV. Vorovieff M A (Teplo i sile 1937, 13, (6), 3-13; Transl. Building Res. Stn. 9/43).		
ASS-11A DETALLURGICAL LITERATURE CLASSIFICATION			
REGION STIMULIA		REGION BOWING	
SECONDARY (MY GUE)		THIRTEEN	
11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30		31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50	

BC

A-1

Kinetics of bimolecular reactions in solution.
V. A. GOLDSCHMIDT and N. K. YEROVINY (J. Phys. Chem. Russ., 1939, 13, 473-482).—The rates of reaction of $NPhMe_2$ and C_6H_5N with CH_2PhCl and of *p*-chloro-, *m*-chloro-, and *p*-bromo-dimethylaniline with allyl bromide in solution have been determined. With $COMe_2$, $PhNO_2$, and $COPhMe$ as solvents the energy of activation and the *B* factor in Arrhenius' equation are small, whilst they are both large when the solvent is an alcohol. Application of Wynne-Jones and Eyring's theory (A., 1935, 1205) indicates that the velocity coeff. of a bimol. reaction should approach a limiting val. as the concns. fall and that for a given reaction *B* should vary little with the solvent. It is inferred that the solvent participates in the above reactions.

R. C.

VOROVITSKAYA, R.Ya.; KLEYMAN, G.I.

Regularizing the wage system of the baking industry. Khleb. i kond.
prom. 1 no.1:29-33 '57. (MLRA 10:4)

1. Rosglavkhleb.
(Bakers and bakeries) (Wages)

VOROVITSKIY, A. N.

USSR/Miscellaneous--machine construction

Card 1/1

Authors : Al'shits, Ya. I., Cand. in Tech. Sci., Docent; Vorovitskiy, A. N.,
Cand. in Tech. Sci., Docent; and Kostyukevich, F. V., Cand. in Tech.
Sci., Docent

Title : Ball type safety clutches

Periodical : Vest. mash. 34/3, 20-24, Mar/1954

Abstract : The number of kinds of safety clutches is limited. There are clutches
in which one of the links breaks under overload, friction clutches,
and clutches in which the gripping is done by means of teeth, balls,
sliding blocks, etc., which slip over each other. Calculations of co-
efficients of friction are given along with pressures required for
various situations, for which equations are worked out.

Institution :

Submitted :

AGROSKIN, A.A.; GRIGOR'YEV, S.M.; ZAGREBEL'NAYA, V.S.; LOSKUTOVA, Ye.H.;
PETRENKO, I.G.; PITIN, B.H.; CHIZHEVSKIY, N.P., akademik otvet-
stvennyy redaktor; VOROVITSKIY, I.B., redaktor; AUZAN, M.P.,
tekhnicheskiiy redaktor

[Increase of the weight of coal per cubic meter by microadditives
of liquid hydrocarbon; a collection of articles] Uvelichenie
nasyphogo vesa uгля mikroobavkami uglevodorodnykh zhidkostei;
sbornik rabot. Moskva, Izd-vo Akademii nauk SSSR, 1947. 398 p.
(Coke) (Coal) (MLRA 9:9)

AL'SHITS, Yakov Isaakovich, dots.; VERKLOV, Boris Abramovich; VOROVITSKIY, Abram Nakhimovich, dots.; KOSTYUKEVICH, Fedor Vasil'yevich, dots.; MALEYEV, Georgiy Vasil'yevich, dots.; OSOKIN, Pavel Andreyevich, assist.; ROZENBERG, Boris Lazarevich, dots.; LADYGIN, A.M., inzh. retsenzent; SHURIS, N.A., red.; SHOROKHOVA, A.V., red. izd-va; BOLDYREVA, Z.A., tekhn. red.; MAKSIMOVA, V.V., tekhn. red.

[Mining machinery] Gornye mashiny. By IA.I.AL'shits i dr. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po gornomu delu, 1961. 491 p. (MIRA 14:12)

1. Glavnyy inzhener Spetsial'nogo konstruktorskogo byuro Kopeyskogo mashinostroitel'nogo zavoda (for Verklov).
(Mining machinery)

AL'SHITS, Ya.I., dotsent, kandidat tekhnicheskikh nauk; VOROVITSKIY, A.N., dotsent, kandidat tekhnicheskikh nauk; KOSTYUKOVICH, F.V., dotsent, kandidat tekhnicheskikh nauk.

Ball-type safety coupling. Vest.mash. 34 no.3:21-24 Mr '54.
(MIRA 7:4)
(Couplings)

USSR/Geophysics - Atmosphere Pressure

VOROVYEV, A. G.

"New Data Concerning the Pressure of the Atmosphere on Mars," Prof A. G. Vorovyev,

Leningrad

Priroda, No 6, pp 84-85

States that although Mars' atmosphere is around 90 millibars, aviation of the type on earth, i.e., with wings, is possible in the Martian atmosphere because the weight of a body on Mars is ~~three times less than~~ ^{one third of the weight} on Earth.

261.T95

S/144/62/000/005/005/005
D289/D308

AUTHORS: Golynskiy, A.I., Assistant, Vorobyev, G.A., Candidate of Technical Sciences, and Mesyats, G.A., Candidate of Technical Sciences

TITLE: High voltage spark discharger with quick commutation

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Elektromekhanika, no. 5, 1962, 560 - 562

TEXT: Basically the device consists of a 3 electrode arrangement in carbon dioxide medium where one electrode is situated underneath the other two. The breakdown of the trigger electrode produces a pulse of ultraviolet light on to the main spark gap and triggers it extremely quickly (10^{-9} sec). The stability of the discharger is maintained by a potential divider network. Allowable voltage relationships between the electrodes are fully analyzed. The discharger described has a working voltage of 15 kV, trigger electrode at 10.2 kV, trigger impulse of 4 kV, breakdown voltage factor (ratio of working voltage to breakdown voltage between electrodes 2 and 3) of 2.5 - 3.2. As a load 5 meter long coaxial cable was used. Time con-
Card 1/2

SOV/86-59-1-15/39

AUTHDR: Vord/yev, L.V., Capt

TITLE: To Eliminate the Causes for Potential Aircraft Accidents (Isklyuchit' predposylki k letnym proisshestviyam). 2. When the Pilot has Made an Error in the Landing Approach Plan Under Unfavorable Weather Conditions (Yesli letchik dopustil oshibku pri zakhode i raschete na posadku v slozhnykh meteo-usloviyakh)

PERIODICAL: Vestnik vozdushnogo flota, 1959, Nr 1, pp 35-37 (USSR)

ABSTRACT: This is the second of three articles which appear under the main title as given above. When making a landing approach under unfavorable weather conditions, even experienced pilots, according to the author, sometimes make errors to such an extent that the landing becomes unsafe, or even impossible. The author describes the proper approach procedure including the method of two 180° procedure turns. There are two tables.

Card 1/1

VOROV'YEV, Yevgeniy Ivanovich; MARGULIS, U.Ya.

[Atomic energy and atomic protection] Atomnaya energiya i
protivoatomnaya zashchita. Pod red. A. Ignat'eva. Moskva,
Institut sanitarnogo prosveshcheniya Ministerstva zdравo-
okhraneniya SSSR, 1956. 74 p. (MLRA 10:6)
(Atomic bomb—Safety measures)

VOROV'YEVA, N.N.; ZALESSKIY, G.D.

Role of filterable viruses in the etiology of rheumatic fever.
Vop.virus. 7 no.3:268-273 My-Je '61. (MIRA 14:7)

1. Novosibirskiy meditsinskiy institut.
(RHEUMATIC FEVER) (VIRUSES)

VOROV'YEVA, Ye. I; ZAITSEVA, A. A.

Refractometric spinal fluid examination in mental diseases.
Nevropat. psikhiat., Moskva 19 no.5:81-82 Sept-Oct 1950.

(CJML 20:1)

1. of the First Leningrad Medical Institute and of the Department of Psychiatry of Vinnitsa Medical Institute.

KOSTENKO, Anastasiya Yakovlevna; GORODETSKIY, Ye.N., red.; VORZHETSOVA,
L.N., red.; NOVOSELOVA, V.V., tekhn.red.

[Study topics for the 10th grade: "Reorganization of the
national economy" and "Consolidation of the Soviet multi-
national state"] Izucheniye temy "Vosstanovleniye narodnogo
khoziaistva. Ukrepleniye Sovetskogo mnogonatsional'nogo gosu-
darstva" v X klasse. Moskva, Izd-vo Akad.pedagog.nauk RSFSR,
1959. 81 p. (MIRA 13:2)
(Russia--Economic policy) (Russia--History)

VOROZHBIT, A.L.; FINANSOV, V.N.

Development of the Kama-Kinel' Depression in Orenburg Province.
Geol. nefti i gaza 7 no.12:12-14 D '63. (MIRA 17:8)

1. TSentral'naya nauchno-issledovatel'skaya laboratoriya tresta
Orenburgneftegazrazvedka.

VOROZHEYENKOV, V.G., gvardii podpolkovnik, voyennyy shturman pervogo klassa;
KROPANEV, B.P., gvardii mayor, voyennyy shturman vtorogo klassa

Navigator D. P. Vysk sets an example. Vest.Vozd.Fl. no.12:39-43
D '60. (MIRA 14:5)

(Navigation (Aeronautics))

VOROZHEYKIN, A., general-major aviatsii v zapase, dvazhdy Geroy Sovetskogo
Soyuza

Below us is Tomarovka. Vest. Vozd. Fl. no.12:72-77 D '61.
(MIRA 15:3)
(World War, 1939-1945--Aerial operations)

VOROZHEYKIN, A., dvazhdy Geroy Sovetskogo Soyusa

Fighter plane. Kryl.rod 13 no.8:24-25 Ag '62. (MIRA 15:8)
(World War, 1939-1945--Aerial operations)

Винницкий, А.; Винницкий, А.; Винницкий, А.; Винницкий, А.

Fighter planes. Kryl. rod. 13 no. 9128-30 d 162 (MIRA 15:10)

(World War, 1939-1945--Aerial operations)

VOROZHEYKIN, A., master proizvodstvennogo obucheniya

You have to be a master cook.... Obshchestv.pit. no.5:52-53 My '60.
(MIRA 13:10)

1. Tekhnicheskoye uchilishche No.6, Yalta.
(Yalta--Cooking schools)

VOROZHEYKIN, A., dvazhdy Geroy Sovetskogo Soyuza

Together with attacking troops. Kryl. rod. 14 no.11:2-4
N '63. (MIRA 16:11)

VOROZHEYKIN, A., general-mayor aviatsii zapasa, dvazhdy Geroy Sovetskogo Soyuza

Risk and feat of arms. Av.i kosm. 46 no.6:83-87 Je '63.

(MIRA 16:8)

(World War, 1939-1945--Aerial operations)

VOROZHEYKIN, A., general-mayor aviatsii zapasa, dvazhdy Geroy Sovetskogo Soyuza

Encounter with young people. Av. i kosm. 47 no.11:84-87 II 164.

(MIRA 17:11)

VOROZHEYKIN, Arseniy Vasil'yevich, Dvazhdy Geroy Sovetskogo Soyuz
general-mayor aviatsii; BARANOV, N.V., red.; CHAPAYEVA, R.I.,
tekhn. red.

[Over the Kursk arch]Nad Kurskoi dugoi. Moskva, Voenizdat,
1962. 262 p. (MIRA 16:2)
(World War, 1939-1945--Aerial operations)

VOROZHEYKIN, A., dvazhdy Geroy Sovetskogo Soyuza

Victory banners over Berlin. Kryl. vol. 16 no.5:4-5 My '65.

(MIRA 28:6)

VOROZHEYKIN, Arseniy Vasil'yevich, general-mayor aviatsii, dvazhdy
Geroy Sovetskogo Soyuz; SMOLIN, V.N., red.; SOKOLOVA, G.P.,
tekhn.red.

[Fighter planes] Istrebiteli. Moskva, Voen.izd-vo M-vo obor.
SSSR, 1961. 297 p. (MIRA 14:4)
(World War, 1939-1945--Aerial operations)

VOROZHEYKIN, D.I.; SKOBELEV, K.I.

Experience in the operation of 220 kv traction substations.
Zhel. dor. transp. 46 no.1:27-31 Ja '64. (MIRA 17:8)

1. Zamestitel' nachal'nika Glavnogo upravleniya elektrifikatsii i energeticheskogo khozysystva Ministerstva putey soobshcheniya (for Vorozheykin). 2. Nachal'nik sluzhby elektrifikatsii i energeticheskogo khozyaystva Severo-Kavkazskoy dorogi (for Skobelev).

VOROZHEYKIN, D.I.

Complete in due time the annual electrification plan, speed up the tempo of work in sections paid for by piece rate. Elek. i tepl. tiaga 7 no. 11: 1-3 N '63. (MIRA 17:2)

1. Zamestitel' nachal'nika Glav'nogo upravleniya elektrifikatsii i energeticheskogo khozyaystva Ministerstva putey soobshcheniya.

VOROZHEYKIN, D.I., inzh.

Electrified railroad districts in France. Elek. i topl. tiaga 5
no.3:45-48 Mr '61. (MIRA 14:6)
(France--Electric railroads)

"APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001861020002-1

APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001861020002-1"

"APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001861020002-1

Card 1/2

APPROVED FOR RELEASE: 03/14/2001

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"APPROVED FOR RELEASE: 03/14/2001

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CIA-RDP86-00513R001861020002-1

APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001861020002-1"

L 12774-66

ACC NR: AT6003160

insignificantly. LiF crystals irradiated by neutron flux were colored more strongly than KCl crystals. Both LiF and KCl crystals were strengthened, although strengthening of the LiF crystals was greater than that of the KCl crystals. The strengthening effects were apparently not associated directly with the coloration of the crystals. The effects of neutron flux irradiation of KCl crystals varied according to the type of hardness. At small irradiation doses H_s and H_p decreased sharply. At doses up to 9×10^{15} n/cm², H_s was 30% lower than in nonirradiated specimens and H_p 20% lower. After reaching a minimum, H_s and H_p began to increase and at $\sim 16 \times 10^{15}$ n/cm² they reached their initial values. In the beginning H_m increased and then reached saturation. The removal of thermal neutrons from the flux by means of cadmium filters had virtually no effect on the dose dependence of the types of KCl crystal hardness studied. Changes in the irradiation temperature changed the behavior of the hardness. For instance, H_s of KCl crystals decreased when irradiated with doses up to 9×10^{15} n/cm², while at low temperature irradiation increased. H_p behaved similarly. Orig. art. has: 22 figures. [JA]

SUB CODE: 20/ SUBM DATE: none/ ORIG REF: 003/ OTH REF: 001/ ATD PRESS: 4184

Card

2/2

HW

VOROZHEIKINA, L. F.

90

PHASE I BOOK EXPLOITATION

SOV/6176

Konobeyevskiy, S. T., Corresponding Member, Academy of Sciences
USSR, Resp. Ed.

Deystviye vadernykh izlucheniy na materialy (The Effect of
Nuclear Radiation on Materials). Moscow, Izd-vo AN SSSR,
1962. 383 p. Errata slip inserted. 4000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Otdeleniye tekhnicheskikh nauk; Otdeleniye fiziko-matematicheskikh nauk.

Resp. Ed.: S. T. Konobeyevskiy; Deputy Resp. Ed.: S. A. Adasinskiy; Editorial Board: P. L. Gruzin, G. V. Kurdyumov, B. M. Levitskiy, V. S. Lyashenko (Deceased), Yu. A. Martynyuk, Yu. I. Pokrovskiy, and N. F. Pravdyuk; Ed. of Publishing House: M. G. Makarenko; Tech. Eds: T. V. Polyakova and I. N. Dorokhina.

Card 1/14

90
SOV/6176
The Effect of Nuclear Radiation (Cont.)

PURPOSE: This book is intended for personnel concerned with nuclear materials.

COVERAGE: This is a collection of papers presented at the Moscow Conference on the Effect of Nuclear Radiation on Materials, held December 6-10, 1960. The material reflects certain trends in the work being conducted in the Soviet scientific research organization. Some of the papers are devoted to the experimental study of the effect of neutron irradiation on reactor materials (steel, ferrous alloys, molybdenum, avial, graphite, and nichromes). Others deal with the theory of neutron irradiation effects (physico-chemical transformations, relaxation of internal stresses, internal friction) and changes in the structure and properties of various crystals. Special attention is given to the effect of intense γ -radiation on the electrical, magnetic, and optical properties of metals, dielectrics, and semiconductors.

Card 2/14

The Effects of Nuclear Radiation (Cont.)

SOV/6176

- Pravdyuk, N. P., Yu. I. Pokrovskiy, and V. I. Vikhrov. Effect of Neutron Irradiation on Internal Friction in Mono- and Polycrystals of Zinc 235
- Zakharov, A. I. Effect of Neutron Irradiation and Plastic Deformation on Young's Modulus and Internal Friction 242
- Konobeyevskiy, S. T., and E. P. Butra. Radiographic Effects in Neutron-Irradiated Crystals 251
- Kolontsova, Ye. V. Radiation and Deformation Disturbances in Crystals 257
- Telegina, I. V., Ye. V. Kolontsova and V. V. Zubenka. Radiation Disturbances in Crystals of Lithium Fluoride 264
- Andronikashvili, E. L., N. G. Politov, and L. E. Voragheykina. Effect of Lattice Disturbances on Mechanical and Optical Properties of Potassium Chloride Crystals. 268

Card 10/14

L 2437-66 EWT(1)/EWT(m)/T/EWP(t)/EWP(b)/EWA(c) IJP(c) JD/JG/GG/GS

ACCESSION NR: AT5023807

UR/0000/62/000/000/0268/0276

AUTHOR: Andronikashvili, E. L.; Politov, N. G.; Vorozheykina, L. F. 62 P.11

TITLE: Effect of lattice disturbances on the mechanical and optical properties of potassium chloride crystals 21.44.55

SOURCE: Soveshchaniye po probleme Deystviye yadernykh izlucheniya na materialy. Moscow, 1960. Deystviye yadernykh izlucheniya na materialy (The effect of nuclear radiation on materials); doklady soveshchaniya. Moscow, Izd-vo AN SSSR, 1962, 268-276

TOPIC TAGS: potassium chloride, crystal lattice defect, F band, color center, irradiation effect, hardness, x ray irradiation, neutron irradiation, gamma irradiation

ABSTRACT: The paper presents initial results of studies undertaken at the Institut fiziki AN Gruz. SSR (Institute of Physics AN Gruz SSR) for the purpose of determining the relationship between various types of lattice disturbances and the hardness of alkali halide crystals. Various methods of inducing the disturbances were employed (additive coloring, x-irradiation, and irradiation with mixed neutron and gamma radiation in the IRT-2000 reactor). Additive and subtractive coloring of KCl single crystals caused a decrease in microhardness and Card 1/2

L 2437-66

ACCESSION NR: AT5023807

scratch hardness; the latter was more sensitive to change in the number of F-centers than the former. Upon exposure to n, γ -radiation, the microhardness and scratch hardness behave differently as the dose increases. It is suggested that this irradiation causes, in addition to the formation of F-centers, new kinds of lattice disturbances which even at low concentrations mask the influence of F-centers on the microhardness effect. The hypothesis that the same defects may affect different types of hardness to different degrees is confirmed. Furthermore, situations arise where different types of hardness change in different directions under the same conditions. This indicates that each type of hardness has a predominant relationship with certain definite types of lattice disturbances. Studies of the influence of x-rays on the F-band intensity show that the number of F-centers changes in a complex manner with increasing irradiation time. Orig. art. has: 10 figures.

ASSOCIATION: none

SUBMITTED: 18Aug62

ENCL: 00

SUB CODE: SS, OP

NO REF SOV: 003

OTHER: 015

Card 2/2 *md*

ACCESSION NR: AT4016310

S/0000/62/000/000/0287/0303

AUTHOR: Andronikashvili, E.L.; Politov, N.G.; Mumladze, V.V.; Vorozheykina, L.F.

TITLE: Plasticity and thermal conductivity of defective alkali halide crystals

SOURCE: Vses. soveshch. po fiz. shchelochnogaloidn. kristallov. 2d, Riga, 1961. Trudy* Fiz. shchelochnogaloidn. kristallov (Physics of alkali halide crystals). Riga, 1962, 287-303

TOPIC TAGS: alkali halide crystal, plasticity, thermal conductivity, F-center, reactor radiation, crystallography, radiation defect, crystal physical property, hardness

ABSTRACT: In an extension of the authors' previous work, the influence of F-centers on plasticity and the influence of reactor radiation on plasticity and thermal conductivity were examined in KCl crystals. The influence of reactor radiation on plasticity was also examined in LiF crystals. F-centers were produced by x-raying in a KUP-200-20-4 unit and an IRT-200 reactor was used for neutron and gamma radiations. Hardness was measured by the scratching and the pendulum swing damping methods. Optical absorption spectra were measur-

Card 1/3

ACCESSION NR: AT4016310

ed with an SF-4 spectrophotometer and an assembly, based on the principles of A.V. Ioffe and A.F. Ioffe and constructed in the authors' laboratory, was used for the determination of thermal conductivity. This method was applicable at close-to-room temperatures and, in a 5 minute procedure, produced results with an accuracy of 3-5 per cent. At least one hundred samples were examined. Curves for the dependence of hardness on the duration of x-raying and the concentration of F-centers showed a steady growth of plasticity of KCl crystals for the duration of x-raying, accompanied by the accumulation of F-centers. Under the influence of reactor radiation KCl crystals showed an initial growth of microhardness, which ceases when a dose of $\sim 10^{16}$ neutron/cm² is reached. In contrast, the resistance to plastic deformation and mechanical strength continued to grow in LiF crystals. The thermal conductivity of KCl crystals under reactor radiation followed a complex pattern, showing an initial decrease, followed by an increase as radiation continued. Orig. art. has: 11 figures.

ASSOCIATION: Institut fiziki AN Gruzinskoy SSR (Institute of Physics, Academy of Sciences of the Georgian SSR)

Cord 2/3

ACCESSION NR: AT4016310

SUBMITTED: 00

DATE ACQ: 06Mar64

ENCL: 00

SUB CODE: GP

NO REF SOV: 010

OTHER: 013

Card3/3

ACC NR: AT7000180

SOURCE CODE: UR/3182/65/002/000/0027/0034

AUTHOR: Andronikashvili, E. L.; Vorozheykina, L. F.; Igitkhanishvili, D. D.; Politov, N. G.

ORG: none

TITLE: Radiative changes in the conductivity of KCl and LiF crystals

SOURCE: AN GruzSSR. Institut fiziki. Elektronnyye i ionnyye protsessy v tverdykh telakh, v. 2, 1965, 27-34

TOPIC TAGS: neutron irradiation, gamma irradiation, crystal dislocation, crystal defect

ABSTRACT: An investigation was made of the relationship between the ionic conductivity and the activation energy of carriers in KCl and LiF crystals caused by reactor irradiation. The temperature dependence of ionic conductivity was investigated in the range from 50 to 400C. The heating of the specimens was carried out at a constant rate of 1 °C/min. The measurements were made in a vacuum of 10^{-4} mm Hg. The specimens were irradiated in the IRT reactor of the Physics Institute of the Academy of Sciences, Georgian SSR at a point where the thermal neutron flux was 2.07×10^{12} neutrons/cm²·sec. The conductivity was measured before and after irradiation with specimens produced from a single ingot. Radiative changes in conductivity accompanied sharp changes in the crystal microstructure following

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ACC NR: AT7000180

irradiation with "critical" doses. For example, KCl crystals irradiated with a dose of 1.2×10^{16} n/cm² displayed a minimum of dislocations when the activation energy was at a minimum and the conductivity was at a maximum. KCl specimens irradiated with doses of 5.8×10^{16} n/cm² and 1.1×10^{17} n/cm² had activation energies of the current carriers of 0.96 ev and 0.84 ev, respectively. Prior to irradiation, the activation energies were 0.84 ev and 1.0 ev, respectively. The thermal treatment taking place during the measurement of conductivity in KCl specimens irradiated at 7.6×10^{15} n/cm² in the temperature range from 75 to 300C did not produce any changes in the conductivity or the activation energy of the current carriers. In LiF crystals, each thermal treatment increased the conductivity of the specimen and decreased its activation energy. The authors thank G. N. Garsevanishvili for irradiating the specimens and V. G. Kvachadze for his participation and discussion of the results. Orig. art. has: 10 figures and 1 table.

[JA]

SUB CODE: 20/ SUBM DATE: none/ ORIG: REF: 002/ OTH REF: 004/ ATD PRESS: 5109

Car: 2/2

ACC NRI AR7000879

SOURCE CODE: UR/0058/66/000/009/E092/E092

AUTHOR: Andronikashvili, E. L.; Vorozheykina, L. F.; Igitkhanishvili, D. D.; Politov, N. G.

TITLE: Radiation-induced changes in the conductivity of potassium chloride and lithium chloride crystals

SOURCE: Ref. zh. Fizika, Abs. 9E736

REF SOURCE: Sb. Elektron. i ion. protsessy v tverd. telakh. No. 2. Tbilisi, Metsniyereba, 1965, 27-34

TOPIC TAGS: potassium chloride crystal, lithium chloride crystal, radiation, ion conductivity, activation energy, carrier activation energy, thermal neutron, radiation defect

ABSTRACT: A study was made of changes in the ion conductivity and the activation energy of carriers in KCl and LiF crystals irradiated with thermal neutrons at a flux density of $2.07 \cdot 10^{12} \text{ cm}^{-2} \text{ sec}^{-1}$ using a reactor of the Institute of Physics of the Academy of Sciences USSR. The activation energy was determined from

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ACC NR: AR7000879

measurements of conductivity as a function of temperature within the 50—400C range. At relatively small radiation dosages conductivity was found to decrease with an increase in the activation energy; at the "critical" radiation dosage, of the order of $1.2 \cdot 10^{16} \text{ cm}^{-2}$, the activation energy reaches a minimum and conductivity a maximum, corresponding to a change by two orders of magnitude. The defects induced by radiation in KCl are thermally more stable than in LiF.

[Translation of abstract]

[SP]

SUB CODE: 20/

Card 2/2

L 33173-66 EWT(1)/T IJP(c) GG

ACC NR: AR6016236

SOURCE CODE: UR/0058/65/000/011/EO90/EO99

AUTHOR: Andronikashvili, E. L.; Politov, N. G.; Vorzheykina, L. Ya.; Abramishvili, M. G.

TITLE: Influence of structure defects on the mechanical properties of crystals 35
B

SOURCE: Ref. zh. Fizika, Abs. 11E695

REF SOURCE: Sb. Elektron. i ionnyye protsessy v tverd. telakh. No. 1, Tbilisi, Metsniyereba, 1964, 13-30

TOPIC TAGS: crystal defect, irradiation effect, potassium compound, hardness, color center, Gamma irradiation, x ray irradiation, neutron irradiation

ABSTRACT: An investigation was made of the influence of irradiation by x rays, γ rays, and neutrons at ordinary temperatures and at liquid-nitrogen temperature on the hardness of KCl and LiF crystals. Three types of hardness were measured: the microhardness H_m , the scratch hardness H_s , and hardness based on the damping of pendulum oscillations H_p . It is shown that as a result of the F-center formation under irradiation with x rays the KCl crystal becomes softer. The discoloring leads to restoration of the H_p hardness. LiF crystals harden when irradiated with x and γ rays independently of F-center formation. Irradiation of KCl crystals influences differently different types of hardness. It is shown that H_s , which decreases upon irradiation at ordinary temperatures, increases after irradiation at low temperatures. When crystals are neutron-irradiated, all three types of hardness increase even

Card 1/2

L 33173-66

ACC NR: AR6016236

during the first stage of irradiation. Low-temperature irradiation of LiF crystals leads to a smaller radiation hardening than irradiation at ordinary temperatures. The process of radiation hardening is completely reversible; annealing of crystals at 600C for 3 hours completely eliminates the hardening. The influence of isothermal annealing at 300 and 700C is demonstrated. B. Prusakov. [Translation of abstract]

SUB CODE: 20

Card 2/2 mc

VOROZHEYKINA, T.V.; PARFENOV, Yu.D.; ZAKUTINSKIY, D.I., prof. nauchnyy ruko-
~~voditel~~

Placental transfer of strontium-90 (Sr^{90}). Biul. eksp. biol. i med.
54 no.8:96-100 Ag '62. (MIRA 17:11)

1. Predstavlena deystvitel'nym chlenom AMN SSSR A.V. Lebedinskim.

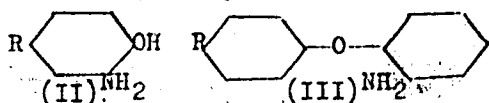
S/079/60/030/04/65/080
B001/B011

AUTHORS: Nikolenko, L. N., Karpova, Ye. N., Vorozhtsov, G. N.,
Sergeyev, V. A., Ivanova, M. Ye.

TITLE: Investigation in the Field of Aromatic Compounds With a Long
Side Chain. IV. Synthesis of Nitro- and Amino-substituted
4-Tert-butyl-, 4-Isocetyl- and 4-(α,α -Dimethyl-benzyl)-phenols

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 4, pp. 1336-1339

TEXT: As of late, some alkyl phenols are being used as intermediates for dyes. It was of interest to use for this purpose p-tert-butyl-(I a), p-isocetyl phenol (I b) and 2-(p-oxyphenyl)-2-phenyl propane-4-(α,α -dimethyl benzyl)-phenol (I v), which are commercially produced in large quantities. From among the products obtained from these phenols, 2-amino-4-alkyl phenols¹(II) and 2-amino-4'-alkyl diphenyl ether (III) are particularly important.



Card 1/3

Investigation in the Field of Aromatic Compounds S/079/60/030/04/65/080
With a Long Side Chain. IV. Synthesis of Nitro- B001/B011
and Amino-substituted 4-Tert-butyl-, 4-Isooctyl- and 4-(α,α -Dimethyl-benzyl)-
phenols

Nitration (Ref. 2) of tert-butyl-, isooctyl- and dimethyl benzyl phenol was carried out with 28.8% nitric acid in benzene at 10-15° (yield 79-84%). Nitro-substituted derivatives of diphenyl ether were obtained by reaction of potassium phenolates with o-nitrochloro-benzene at 160-170° in the presence of copper as a catalyst (Ref. 3), with the tert-butyl-, isooctyl- and dimethyl benzyl group entering the para-position to the ether group. The reduction of the reaction temperature to 105°, recommended in publications, with a protracted heating (50 h instead of 4-5 h), without using copper (Ref. 4), gave rise to much smaller yields. The reduction of the homologs of 2-nitrodiphenyl ether and o-nitrophenol into the corresponding amines took place (in a more advantageous manner than by the usual procedure with cast-iron chips in electrolytic medium) with hydrogen on the nickel skeleton catalyst at normal pressure and room temperature. There are 1 table and 6 references, 2 of which are Soviet.

Card 2/3

Investigation in the Field of Aromatic Compounds · 8/079/60/030/04/65/080
With a Long Side Chain. IV. Synthesis of Nitro- B001/B011
and Amino-substituted 4-Tert-butyl-, 4-Isooctyl- and 4-(α,α -Dimethyl-benzyl)-
phenols

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskii institut imeni D. I. ✓
Mendeleeva (Moscow Institute of Chemical Technology imeni
D. I. Mendeleev)

SUBMITTED: April 13, 1959

Card 3/3

VOROZHBA, N. V.

VOROZHBA, N. V.: "The treatment of persistent unhealing erosion (pre-cancerous state) of the cervix uteri using domestic preparations of radium-mesothorium." Irkutsk State Medical Inst. Irkutsk, 1955. (Dissertations for the Degree of Candidate in Medical Sciences).

SO: Knizhnaya Letopis' No. 22, 1956

HUNGARY/General Problems of Pathology. Comparative Tumors. Human U-5
Tumors.

Abs Jour : Ref Zhur - Biol., No 14, 1958, No 66145

Author : Torozhba N.V.

Inst : Department of Obstetrics and Gynecology of the Irkutsk
Medical Institute

Title : The Treatment of Longstanding Non-healing Erosions (Precancer-
ous State) of the Cervix Uteri by Means of Native Preparations
of "Radium-Mesothorium".

Orig Pub : Sb. nauchn. tr. kafedry akusherstva i gynecol. Irkut. med.
in-ta, Irkutsk, 1956, 95-113

Abstract : Longstanding, non-healing erosions of the cervix uteri were
treated with radium-mesothorium rays (104 females). The
cure rate reached 93.4 percent. Suppression of menstrual
function was observed in a number of patients. -- I.D.
Nechayeva.

Card : 1/1,

EXCERPTA MEDICA Sec.10 Vol.11/6 Obst. & Gyne June 58

VOROZHBA, N. V.

979. TREATMENT OF CHRONIC CERVICAL EROSIONS (PRECANCEROUS STATE) BY NATIONAL PREPARATIONS OF RADIUM-MESOTHORIUM (Russian text) - Vorozhba N. V. - SBORN. TRUD. KAF. AKUSH. I GINEK. IR-KUTSK. MED. INST. 1956 (95-118)

Radium-mesothorium irradiation was employed in the treatment of chronic erosions in 104 women over the age of 40. Cure resulted in 91 patients (83.4%); exacerbations of the inflammatory process in the parametrium occurred in 0.9%. The best method of treatment of a markedly enlarged uterine cervix is a simultaneous introduction of 20-30 mg. of radium-mesothorium into the cervical canal for 24-28 hr. and application of the same quantity to the uterine cervix. The dose has to be individually determined, from 1,000 to 2,800 mg. hours, and in cases of precancerous state, up to 3,500 mg. hours. Preparations of radium-mesothorium, in doses of 940 mg. hours and over, suppress the ovarian function in women over 40 yr. of age (especially over 47 yr. of age). A complete healing of cervical erosions in the majority of patients takes place clinically during the 12th-13th week after treatment; and morphologically after 13-15 weeks. To assess any changes in the hormonal function of the ovaries, the vaginal smear method could be used 10-12 weeks after the end of treatment; before that time the presence of an erosion alters the cellular content of the vaginal secretion. Treatment with radium-mesothorium preparations is recommended only for patients of 40 yr. of age and over, especially in the presence of chronic erosions associated with climacteric bleeding. Irradiation tends to produce simultaneously healing of erosions and cessation of bleeding.

(S)

VEDENOV, Aleksey Nikolayevich; VOROZHBIT, A.A., nauchnyy red.; BARKOVSKIY, I.V., red.; LEVONKYSKAYA, L.G., tekhn.red.

[Taking pictures with miniature cameras; manual] Moloformatnaia
fotografiia; rukovodstvo-spravochnik. Leningrad, Lenizdat, 1959.
687 p. (MIRA 12:12)
(Miniature cameras) (Photography--Handbooks, manuals, etc.)

VOROZHBIT, A.

When the author is in command of the subject ("For the beginning
amateur photographer" by K.V. Vendrovskii and B.A. Shashlov.
Reviewed by A. Vorozhbit). Sov. foto 18 no.5:68-69 My '58.
(Photography) (MIRA 11:5)
(Vendrovskii, K.V.) (Shashlov, B.A.)

VOROZHBITOV, I. G.

Vorozhbitov, I. G.

"Paths of Drainage of Lymph from the Distal Sections of the Thoracic Extremity (sic) of the Horse, and Their Topography." Moscow Veterinary Academy, Min Higher Education USSR. Chair of Operational Surgery and Topographical Anatomy. Moscow, 1955 (Dissertation for the degree of candidate in Veterinary Sciences)

SO: Knizhnaya letopis' No. 27, 2 July 1955

Country : USSR M-4
CATEGORY :
ABS. JOUR. : RZBiol., No. 19 1959, No. 87004
AUTHOR : Bogdan, P. I.; Vorozhbitov, V. V.
INST. :
TITLE : Hard Wheat for Virgin Lands of Altai
ORIG. PUB. : Sb.: God raboty po osvoyeniyu tselinnykh i
zaleznykh zemel' v Altayskom kraye. Moscow;
ABSTRACT : No abstract.

CARD: 11.

MIKHAYLOVA, N.N.; VOROZHEYEVA, V.P.

Determination of hydroxybenzophenone derivatives by paper chromatography. Zav. lab. 30 no.7:802-803 '64.

(MIRA 18:3)

1. Nauchno-issledovatel'skiy institut khimikatov dlya polimernykh materialov.

VOROZHEYKIN, A.

First graduates. Obshchestv.pit. no.9:20-21 S '59.
(MIRA 12:12)

1. Master proizvodstvennogo obucheniya tekhnicheskogo uchilishcha No.6, Yalta, Krym.
(Yalta--Cooking schools)

VOROZHEYKIN, D.I.; FAMINSKIY, G.V.

Repair and utilization of rolling stock in the people's democracies.

Elek.1 tepl.tiaga no.10:45-48 0 '57. (MIRA 10:11)

(Europe, Eastern--Railroads--Cars--Maintenance and repair)

VOROZHEYKIN, D.I., inzh.; PANFIL', L.S., inzh.

Instructive lessons; quality of designing and erecting contact
networks. Elek. i tepl. tiaga no.6:17-19 Je '58. (MIRA 11:6)
(Electric railroads--Wires and wiring)

VOROZHNYKIN, D.I., inzhener; KRASKOVSKAYA, S.N., inzhener.

Improvement of quick-break switches. Elek. i tepl. tiaga no.4:
17-18 Ap '57. (MIRA 10:6)
(Electric cutouts)

VOROZHEYKIN, Dmitriy Ivanovich, inzh.; LIMAN, Grigoriy Markovich; LEVIN, Boris Mordukhovich; BEKHTEREV, Ivan Andreyevich; CHERNYSHEVICH, Fedor Ignat'yevich; BOVE, Ye.G., kand. tekhn. nauk, retsenzent; TISHCHENKO, A.I., inzh., retsenzent; YAKOVLEV, D.V., inzh., red.; BOBROVA, Ye.N., tekhn. red.

[Operation and maintenance of electric d.c. locomotives] Ekspluatatsiia i obsluzhivanie elektrovozov postoiannogo toka. Moskva, Vses. izdatel'sko-poligr. ob"edinenie M-va putei soobshchenia, 1961. 341 p. (MIRA 14:8)
(Electric locomotives)

IVANOV, I.I.; VOROZHEYKIN, D.I.

Methods of economizing on electric power on the railroads. Zhel.
dor. transp. 39 no.3:43-49 Mr '57. (MLRA 10:4)

1. Glavnyy inzhener Glavnogo upravleniya elektrifikatsii i energeti-
cheskogo khozyaystva Ministerstva putey soobshcheniya (for Ivanov)
2. Glavnyy inzhener Elektrovoznoye upravleniya Glavnogo lekomotivnogo
khozyaystva Ministerstva putey soobshcheniya (for Verzhheykin)
(Electric railroads)

L 13048-66

ACC NR: AP5027590

consumption of the additive in the neutralization of the fuel combustion and oil oxidation products, the relationships established for the consumption of additives during short-term tests cannot be extrapolated to longer periods of service of the oil. Orig. art. has: 4 figures.

SUB CCDE: 07/ SUBM DATE: none/ ORIG REF: 003/ OTH REF: 001

Card 2/2

L 42173-66 EWT(m)/T DJ

ACC NR: AR6014532

(A)

SOURCE CODE: UR/0081/65/000/019/P018/P018

AUTHORS: Badyshova, K. M.; Vipper, A. B.; Vorozhikhina, V. I.; Denisenko, K. K.; Kreyn, S. E.; Pyatiletova, N. I.; Ryazanov, L. S.; Yastrebov, U. I.

37

TITLE: Effect of the extent of refining¹¹ of the distillate and residual components of DS-14 oil from sulfurous petroleum upon their operational properties

SOURCE: Ref. zh. Khimiya, Abs. 19P129

REF SOURCE: Tr. Kybyshevsk. n.-i. in-t neft. prom-sti, vyp. 25, 1964, 85-95

TOPIC TAGS: lubricating oil, petroleum refining, phenol / DS-14 lubricating oil, MS-20 lubricating oil, DS-11 lubricating oil

ABSTRACT: Laboratory study and testing on the engine YaAZ-204 of five samples of DS-14 oil of Novokybyshev NP2 (differing by the technology of their processing) have been performed. The study shows that the changes in the extent of phenolic refining of distillate and residual components (within the limits of 160—180 and 250—320% of phenol, respectively) have no effect on the detergency, antioxidative, and anti-wear properties¹¹ of DS-14 oil containing effective additives. Economically, the most convenient method for producing DS-14 oil is to mix the residual and distillate components of Diesel oil, 60 and 40%, respectively, (i.e., components treated to a less extensive phenolic refining). This leads to lowering the price of DS-14 oil by 15% and to increasing its yield by 4%, as compared with the production of DS-14 oil by mixing oils MS-20 and DS-11.¹¹ A. N. [Translation of abstract]

SUB CODE: 11/

Card 1/1

VOROZHISHCHEV, V.I., inzh.; YUSHIN, P.V., inzh.; MASLOVA, V.N., inzh.

Effect of aluminum on the contamination by nonmetallic inclusions, the plasticity at high temperatures, and the mechanical properties of steel. Stal' 25 no.8:852-854 S '65. (MIRA 18:9)

1. Kuznetskiy metallurgicheskiy kombinat.

AGRANENKO, V.A., kand.med.nauk; VOROZHISHCHEV, V.V.

Crush syndrome and its treatment by the method of hemodialysis
using the "artificial kidney" apparatus. Vost.khir. no.5:63-
68 '62. (MIRA 15:11)

1. Iz Pochechnogo tsentra (zav. - V.A. Agranenko) Tsentral'nogo
ordena Lenina instituta gematologii i perelivaniya krovi (dir. -
prof. A.A. Bagdasarov [deceased]).

(RENAL INSUFFICIENCY)

(KIDNEYS, ARTIFICIAL)

(TRAUMATISM)

AGRANENKO, V. A.; VOROZHISHCHEV, V. V.

Hemodialysis by means of the "artificial kidney" apparatus
without use of a donor's blood. Probl. gemat. i perel. krovi
no.1:3-9 '62. (MIRA 15:7)

1. Iz pochechnogo tsentra (zav. V. A. Agranenko) Tsentral'nogo
ordena Lenina instituta gematologii i perelivaniya krovi (dir. -
deystvitel'nyy chlen AMN SSSR prof. A. A. Bagdasarov[deceased])

(ARTIFICIAL KIDNEY)

VOROZHKA, N., serzhant

An improvised "assembly" on technology is held. Starsh.-serzh.
no.11:17 O[i.e. N] '61. (MIRA 15:2)
(Airplanes, Military--Maintenance and repair)

VOROZHKO, A.V., inzhener.

Industrial safety aspects of modern equipment. Izobr. v SSSR 1 no.6:
26 D '56. (MLRA 10:4)
(Electric machinery--Safety appliances) (Industrial safety)

IMAYEV, E. (g. Sukhumi); BUYUKYAN, S. (g. Petrodvorets, Leningradskoy obl.);
VOROZHKO, V. (g. Dnepropetrovsk); BURENIN, V. (g. Yegor'yevsk,
Moskovskoy obl.); SAMYLOV, I. (Krasnoyarskiy kray); TARACHENKO, I.
(g. Matislavl', Mogilevskoy obl.)

Suggestions of readers. Radio no. 4:47 Ap '60.

(MIRA 13:8)

(Radio)

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Effect of gamma radiation on the dielectric properties of some
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im. V.V.Kuybysheva.
(Electric insulators and insulation) (Gamma rays)

akademikom Ye. N. Pavlovskim.
(Scales (Fishes)) (Pacific Ocean--Salmon)
(Growth)

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TITLE: The Electrical and Physical Properties of Technical Electric
Insulation Materials When Subjected to Radioactive Irradiation

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TEXT: Experimental data are given in the paper under review. The influence of gamma radiation on the electrical and physical characteristics of highly polymeric dielectrics, siliconorganic and phenol formaldehyde synthetic materials. Irradiation was carried out with a betatron (design by the Tomskiy politekhnicheskii institut (Tomsk Polytechnic Institute)) with an energy of the gamma rays of 15 Mev and a dosage rate of 300-1200 r/min. The samples were irradiated at various temperatures (-60, +20, +60°C) and at tropical humidity (+40°C and relative humidity of the air of 98%). The following was determined on the basis of these experiments described here in detail. High-polymer dielectrics of the

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polyethylene-, "Fluoroplast", and polystyrene type do not change the mechanism of the dielectric losses and the polarization at an irradiation with gamma rays of a dosage of up to 10^6 at room temperature. The absolute values of the dielectric constants, of the loss angle, and the electric strength remain unchanged. An increase of the electrical conductivity is observed in polyethylene on low-temperature irradiation, and a reduction on irradiation under tropical conditions. In the case of the "Steklotekstolit SKM-1" (organosilicon synthetic material), the greatest changes occur as a result of low-temperature irradiation and at tropical humidity. The loss angle and the dielectric constant change most in consequence of the irradiation in the range of low frequencies. The electrical conductivity and the ohmic part of the dielectric losses increase in organosilicon rubber after irradiation. An irradiation of raw rubber with gamma rays accelerates the vulcanizing process. An increase of the losses is observed at an irradiation with gamma rays of the phenol formaldehyde synthetic materials. The loss angle changes most after an irradiation at low temperatures and under tropical conditions. The dielectric constant and the electric strength of these synthetic materials do not change after an

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irradiation with gamma rays under the conditions mentioned. It is stated on the basis of these experimental data that the radiation strength of electric insulation materials depends on the physical and chemical properties of the material and its structure, as well as on the exterior conditions during irradiation and investigation. The authors are of the opinion that the character of the polarization and the dielectric losses in one or the other temperature- and frequency range is the most important criterion for the radiation strength of the dielectric. It is necessary to know the temperature- and frequency characteristics of the dielectric constant and the angle of dielectric losses before expressing an opinion on the relative stability of the electric insulation material. The following persons took an active part in the experiments: V.D. Dedkov, Ye.A. Zimina, M.D. Lavrov, T.G. Mikhaylova, Ye.S. Nesmelova, T.B. Nedokos, L.A. Prudnikova, G.V. Sitozhevskaya and A.I. Tovbina. There are 16 figures.

ASSOCIATION: Sibirskiy fiziko-tekhnicheskii institut pri Tomskom Gosudarstvennom universitete (Siberian Physics and Technology Institute at the Tomsk State University)

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